



Testimony of
Peter D.H. Stockton
Senior Investigator
Project On Government Oversight (POGO)
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Chairman Everett and Mr. Reyes, thank you for inviting me to testify at your hearing on future plans for the nuclear weapons complex. The Project On Government Oversight (POGO) is an independent organization that investigates and exposes corruption and other misconduct in order to achieve a more accountable federal government. We think the Secretary of Energy's Advisory Board report, headed by Dr. David Overskei, was very thoughtful, looking at the nuclear complex over the next 25 years. However, POGO's approach is focused on the near-term, because of the enormous amount of money that will be spent protecting the nuclear material where there is either a redundant mission or no mission at all. In consultation with security experts throughout the federal government, POGO conducted an investigation to determine how nuclear weapons sites could best meet the new security requirements, or Design Basis Threat (DBT),¹ while also lessening the enormous financial burden of trying to protect the materials at 13 separate sites. This investigation has found that disposing of excess nuclear materials and consolidating remaining materials in fewer and more easily-defended locations could save the government billions of dollars over three years while also better protecting the public from nuclear terrorism. In this post-9/11 world, it is unconscionable that we continue to store plutonium and highly-enriched uranium – the nuclear material most attractive to terrorists – in WWII-era buildings, some of which are even built of wood. This material is stored at great cost to the taxpayer, and some of the sites are in highly-populated areas. It is incumbent upon the Department of Energy (DOE) and the Congress to force change, as uncomfortable as that process may be.

¹ The Design Basis Threat (DBT) describes the level of threats the protective force is required to defend against – the number of outside attackers and inside conspirators, and the kinds of weapons and size of truck bombs that would be available to terrorists.

There are 13 sites across the country that store large quantities of weapons-grade Special Nuclear Materials (SNM). The responsibility for these sites is divided between the Department of Energy (DOE)'s National Nuclear Security Administration (NNSA) and Energy, Science & Environment (ESE), and the Nuclear Regulatory Commission (NRC). In POGO's 2005 report, "U.S. Nuclear Weapons Complex: Homeland Security Opportunities," we recommended ways in which DOE should de-inventory six sites of SNM and consolidate these materials at more secure sites in the next three years. In addition, POGO encouraged accelerating the process of blending-down of excess highly-enriched uranium (HEU) and immobilizing excess plutonium. We are in no way suggesting shutting down sites, but are simply stating that these six sites pose unnecessary homeland security risks and budgetary pressures by continuing to store SNM.

In discussions with NNSA, we have learned that they now have a plan that will significantly consolidate their SNM. They should be congratulated for taking this step. The problem remains however, that they are looking too far into the future to accomplish their plan – at least two Administrations into the future. In the meantime, we are spending billions of dollars to protect this material.

Former Energy Secretary Spencer Abraham encouraged consolidating nuclear materials stating, "Ultimately, I believe we need to both reduce the number of sites with Special Nuclear Material to the absolute minimum, consistent with carrying out our missions, and to consolidate the material in each of those sites to better safeguard that material." At first, we were encouraged when Secretary Bodman ran a consolidation task force out of his office. However, the consolidation effort slid down into the Environmental Management bureaucracy. The proposed timelines for consolidation are so far into the future that they are easy to accept because the hard work is left for future Administrations and other policy makers. Secretary Bodman needs to inject immediacy into this plan to make it successful. We know from experience that officials throughout the nuclear weapons complex have and will strongly resist any change. Those inside the complex have seen that they can just out-wait any new directives until the current Secretary has moved on, and the status quo can be maintained. That happened to Secretary Richardson as well as Secretary Abraham and Deputy Secretary Kyle McSlarrow. The major reason for the resistance from both the sites and the program offices is their concern that if a site loses its SNM, the site would be closed.

An array of concerns arises when it comes to securing America's nuclear material, but security experts' greatest fear is very distinct: a terrorist group successfully reaches its target at one of the facilities and, within an extraordinarily short time, uses the HEU to create an improvised nuclear bomb on site (known as an Improvised Nuclear Device, or IND). It only takes a critical mass of HEU (about 100 pounds) to create an IND. To put this in perspective, one site alone stores about 400 metric tons of HEU, enough for 14,000 nuclear warheads.

Let me give you an example of how these timelines get stretched out by the bureaucracy. I began working on these issues while acting as Special Assistant to then-Secretary of Energy Bill Richardson in 1999. At that time, we identified Los Alamos' Technical Area 18 (TA-18) as the most vulnerable site that demanded immediate attention. It is at the bottom of a canyon, and

the site's security force had lost all independent force-on-force's run there, including the famous "garden cart" incident, and the October 2000 force-on-force test. Several mock "terrorists" got into one of the facilities where large plates of highly-enriched uranium were outside the vault. The protective force could not get the mock "terrorists" out, and as a result the attackers had time to create an IND – potentially a 10 kiloton nuclear detonation – that would have destroyed a significant portion of northern New Mexico.

It is worth noting that it was pre-9/11, in 2000, when then-Secretary Richardson ordered TA-18 to be de-inventoried by the end of 2004. Somehow Los Alamos was able to ignore him. After the 9/11 attacks, you would think DOE would have acted quickly. In fact, it has taken the six years, with tremendous focus by Secretary Abraham, Deputy Secretary McSlarrow and DOE site manager Ed Wilmot (as well as POGO) to finally de-inventoried TA-18 of its SNM. A large part of it is still waiting at TA-55 until it is ultimately delivered to the Device Assembly Facility at the Nevada Test Site. We hope the excruciating story of TA-18 will not be the model for inaction in the face of both security and budgetary needs.

NNSA is now struggling to resolve the growing tension that exists between budget constraints and security requirements as long as the materials remain spread across the complex. It appears ESE does not even recognize the problem. POGO has internal DOE emails that indicate they are engaged in what I can only call the mating dance of a prairie chicken about what to report to your Committee. I'd like to submit them for the record. Several DOE sites cannot meet the 2003 DBT – which is far less robust than the most recent DBT. The Office of Management and Budget cut the FY 2007 DOE security budget by \$200 million, mostly because they were disappointed in the lack of progress in DOE's consolidation efforts. Ambassador Linton Brooks writes that he can't reveal the cut in security funding because he has to defend the President's budget. DOE's Office of Security and Safety Performance Assurance Director Glenn Podonsky pointed out that the way out of this morass is to consolidate the SNM and reduce the security costs. Some sites, as you probably know, are preparing to request waivers from the Secretary to exempt them from the 2003 DBT. One site, Y-12, has already been granted a waiver. Hanford and Oak Ridge National Laboratory (ORNL) are in the process of receiving a waiver.

Now that TA-18 is de-inventoried, POGO has broken down the remaining sites into the following categories:

- Sites that should be de-inventoried immediately
 - Lawrence Livermore National Laboratory
 - Oak Ridge National Laboratory
 - Sandia National Laboratory
 - Hanford Reservation

- On-Site Consolidation Opportunities
 - Y-12 Facility at Oak Ridge
 - Pantex Plant
 - Unused or Under-used Secure Storage Sites
 - Device Assembly Facility at the Nevada Test Site
 - Building 691 at the Idaho National Lab
 - Facilities that Should Ultimately be De-inventoried
 - Savannah River Site

I ask that our complete report be submitted for the record. I will focus my testimony on the most urgent priorities for the Committee to consider.

SITES THAT SHOULD BE DE-INVENTORIED IMMEDIATELY

Lawrence Livermore National Lab

When Livermore Lab was first built, it was located in the middle of a desert. Since that time a residential neighborhood has encroached to the fence line of the lab, with houses and athletic fields literally across the street. Nearly seven million people reside within a 50-mile radius of the lab. Superblock, where the plutonium and highly-enriched uranium is located, is only approximately 900 yards from these houses. Securing these materials creates a unique problem. How do you adequately protect these materials without unduly endangering the surrounding population? The security forces at Livermore are constrained in a way that no other NNSA security force is. It is precisely because of those residential neighborhoods that the Livermore security force cannot use the same weapons used by the security forces at the other sites. Despite earlier assurances from DOE that these restrictions on Livermore's defensive measures posed no problems, DOE has reversed course and decided that the restrictions are, indeed, a problem. DOE has lifted those restrictions to a degree and is now planning to deploy Gatling guns that fire 3,000 rounds a minute. The military kill-range for such a gun is one mile, but it can kill up to two miles. Within that one-mile range are two elementary schools, a pre-school, a middle school, a senior center, and athletic fields. Even in an accidental firing, the lab will be spraying lethal bullets into the neighborhood.

Currently the only mission for SNM at Livermore is for studying the aging of plutonium, and studying cracked plutonium pits for nuclear warheads. This same work is conducted at Los Alamos National Laboratory.

DOE has finally acknowledged that Livermore should be de-inventoried of its Category I and II Special Nuclear Materials (SNM). The lab could retain Category III and IV quantities for their experiments, as those quantities would be of no use to terrorists. However, DOE doesn't propose to accomplish this very important step until 2014. It is important to point out that the plan is to wait to move the materials until the Chemistry and Metallurgy Facility Replacement (CMRR) is built at Los Alamos—a total of at least eight years. Then all the Los Alamos and Livermore material is scheduled to move again by 2025 to the Nevada Test Site. Why build a new building at Los Alamos, if only a decade later it is expected to be de-inventoried?

POGO's Recommendation:

If it is determined by NNSA that it wants to continue the redundant mission at Livermore, the material could be moved to the Device Assembly Facility (DAF) at the Nevada Test Site. The Livermore glove boxes, and any other necessary equipment, could be shipped to the DAF. The scientists could easily take the one-hour flight to the DAF, as they did for years during the nuclear test program, when they need to conduct experiments with larger quantities of SNM.

Oak Ridge National Laboratory

Oak Ridge National Lab (ORNL) maintains some stockpiles of Neptunium-237 and stores 1,000 cans of Uranium-233. It has generally been assumed that the Uranium-233 could not be transported, nor would it be accepted by Y-12, which is more capable of protecting the materials. This material is as potent and dangerous as highly-enriched uranium in terms of making an improvised nuclear bomb. POGO's staff was at ORNL last September, and walked unescorted around the Building 3019, which houses 1,000 cans of U-233, for 15 minutes before there was a response from the guard force. There was virtually no physical security around the building, and no stand-off for truck bombs. We were able to walk up and touch the building. Since then, DOE has sent three teams to ORNL in the past few months to determine how they could possibly meet the 2003 DBT. In the last force-on-force conducted there, the entire ORNL protective force was "killed" by the mock terrorists in 90 seconds. Currently, ORNL security relies on a SWAT team from Y-12 to come to their rescue if there is an attack on ORNL. The problem with this arrangement is that such a move would leave Y-12 under-protected, if indeed the ORNL attack was simply a diversion.

The decision about what to do with this material has been difficult to make because the material at ORNL is utterly orphaned. ESE says NNSA owns the material, so they don't have to pay to deal with it; and NNSA says it does not own it, and that it is ESE's problem. This "stove-piping" is a real problem within DOE. We understand that DOE's ESE is trying to get exempted from the 2003 DBT.

POGO's Recommendation:

ORNL should be de-inventoried of all Special Nuclear Materials immediately. The cost should be borne equally by NNSA and ESE – largely to stop the senseless finger pointing. The Neptunium-237 should be shipped to the underground storage facility in Idaho. There are two options for the U-233: immediately downblend it at ORNL, or move it for temporary storage to Y-12 and downblend it there.

Sandia

The only weapons quantities of SNM stored at Sandia, on the edge of Albuquerque, are some minor weapons parts and the HEU fuel plates for the labs' SPR III burst reactor. This material poses a risk because the fuel plates can be used to make an IND in minutes. In 2004, then-Secretary Abraham announced that Sandia would be de-inventoried of these materials by 2007. That schedule has now slipped to 2008.

POGO's Recommendation:

We recommend the immediate de-inventorying of all of Sandia's SNM. If it is determined later that there is a mission-related need for the SPR III, there are two reactors that could perform the same tests at White Sands and Aberdeen.

Hanford

Hanford has retained a large quantity of plutonium that is not scheduled to be moved until 2007, and some SNM from the Los Alamos Molten Plutonium Experiment (LAMPRE), for which there are no plans for disposition. This is of particular concern, as Hanford failed a force-on-force exercise after 9/11, and they are currently trying to get exempted from their DBT requirements. This material is also orphaned. Neither NNSA nor ESE acknowledges ownership of or responsibility for this material.

POGO's Recommendation:

All the remaining SNM should be shipped temporarily to the DAF until final disposal at Savannah River, or Building 691 at Idaho National Laboratory. Again, NNSA and ESE should share in the burden.

ON-SITE CONSOLIDATION OPPORTUNITIES

Highly-Enriched Uranium Materials Facility (HEUMF) at Y-12

Until five years ago, when Lockheed Martin still managed Y-12 near Oak Ridge, Tennessee, there were plans to build an underground or bermed storage facility. Virtually all modern nuclear storage facilities are underground, including the DAF and Kirtland Underground

Munitions Storage Complex (KUMSC) at Kirtland Air Force Base. An underground facility would be much harder to penetrate and would serve as a greater deterrent to terrorists. U.S. Special Operations Command personnel have told POGO that an above-ground facility is a substantially more vulnerable design and that the underground option is the only credible one. Yet the current contractor, BWXT, changed the plan to build an underground or bermed facility to that of an above-ground facility.

DOE is currently constructing the above-ground building known as the Highly-Enriched Uranium Materials Facility (HEUMF) to store the plant's hundreds of tons of HEU. The DOE Inspector General has criticized both the design and cost of this new building, concluding that it will cost more and be less secure than the original plan for a bermed facility.

In 2004, Sandia National Lab was asked by NNSA to evaluate the HEUMF plans. It was ultimately Sandia's approval of this design that persuaded DOE Headquarters to give the green light for the above-ground building. POGO has learned, however, that the Sandia study never compared the HEUMF design with an underground or bermed design, explaining in the small print they did not want to have to consider an entire redesign for the building. Ironically, it was an earlier Sandia study that had recommended using existing designs from two other government-owned underground facilities to solve the Y-12 storage problem – the DAF or KUMSC.

There is an opportunity, however, to take advantage of the current debacle in the HEUMF construction. As you know, construction was halted several weeks ago on HEUMF at Y-12 because the amount of rebar in the concrete does not meet specifications. There is now talk of starting from scratch.

POGO Recommendation:

We suggest you take this opportunity to stop throwing good money after bad, and dramatically upgrade security at far less cost than the current plan. Stop the above-ground design and take the design of the DAF, which the Corps of Engineers built for \$100 million – far less than the \$380 million that is currently estimated for the HEUMF. A second option would be to incorporate berming into the current design – DOE officials have privately suggested that berming would be an important security improvement to the building.

Pantex

Pantex stores thousands of plutonium pits, some from 40 to 50-year old weapons, in World War II- era bunkers in an area called, "Zone 4." Zone 4 is located at the end of an Amarillo Airport runway. There has been concern for over 30 years about a plane, either accidentally or intentionally, crashing into these bunkers and causing a major radiological

dispersal of plutonium. These plutonium pits will never be used in either refurbished or new nuclear weapons.

POGO Recommendation:

The pits should be declared surplus and immobilized as soon as possible at Pantex. In the meantime, plutonium in Zone 4 should be moved onsite to the more appropriately located and secure Zone 12.

UNDER-USED SECURE STORAGE SITES

Device Assembly Facility at Nevada Test Site and Building 691 at Idaho National Lab

There are two secure underground sites where SNM could be stored at far less cost than are under-used, or not used at all, in the complex. In addition to the DAF, a bermed facility at the Nevada Test Site, there is also the equally well-protected underground Building 691 at the Idaho National Lab. Until the SNM of TA-18 was moved to the DAF over the last year, both buildings remained entirely empty. We have been informed by top DOE officials that there is enough storage space in each of these facilities to store the entire stockpile of SNM in the complex.

SITES WITH INADEQUATE SECURITY STANDARDS

BWXT and Nuclear Fuel Services

Two facilities that should be of interest to the Committee are the Nuclear Products Division of BWXT in Lynchburg, Virginia, and Nuclear Fuel Services (NFS) in Erwin, Tennessee. They are commercially operated, and primarily funded by the Office of Naval Reactors of the DOE; they house tens of tons of HEU that is “owned” by DOE’s NNSA. NRC regulates the facilities and is responsible for setting the DBT and to test security at these sites. However, we understand that the DBT for these two sites is significantly lower than the DOE DBT to protect the same dangerous material – HEU.

POGO’s Recommendation:

POGO recommends transferring authority for security at these sites to the Department of Energy.

Even with the strongest leadership from the Secretary’s office, the only way these initiatives will be enacted is with your Committee’s continued vigilance. DOE’s history has shown that without constant pressure from Congress and specifically from this Subcommittee, these consolidation initiatives will likely fail.